

CLAIMS

What is claimed is:

1 1. A robot system, comprising:
2 a mobile robot that has a camera and a monitor;
3 a first remote station that can access said mobile
4 robot; and,
5 a second remote station that includes an arbitrator
6 that can control access to said mobile robot by said first
7 and second remote stations.

1 2. The system of claim 1, wherein said arbitrator
2 includes a notification mechanism.

1 3. The system of claim 1, wherein said arbitrator
2 includes a timeout mechanism.

1 4. The system of claim 1, wherein said arbitrator
2 includes a queue mechanism.

1 5. The system of claim 1, wherein said arbitrator
2 includes a call back mechanism.

1 6. The system of claim 1, wherein said second remote
2 station can access said mobile robot, and said first and
3 second remote stations each have a priority and said
4 arbitrator provides robot access to said remote station
5 with a highest priority.

1 7. The system of claim 6, wherein said remote
2 stations may be given priority as a local user, a doctor, a
3 caregiver, a family member, a service user or another
4 mobile robot.

1 8. The system of claim 1, wherein said mobile robot
2 operates in either an exclusive mode or a sharing mode.

1 9. The system of claim 1, wherein said first remote
2 station transmits a communication for said mobile robot
3 that is initially transmitted to said second remote
4 station.

1 10. The system of claim 1, wherein said first remote
2 station sends a communication for said mobile robot that is
3 initially transmitted to said mobile robot.

1 11. A robot system, comprising:
2 a mobile robot that has a camera and a monitor;
3 a first remote station that can access said mobile
4 robot; and,
5 a second remote station that includes arbitration means
6 for controlling access to said mobile robot by said first
7 and second remote stations.

1 12. The system of claim 11, wherein said arbitrator
2 means includes notification means for notifying said first
3 remote station that said second remote station is
4 requesting access to said mobile robot.

1 13. The system of claim 11, wherein said arbitrator
2 means includes timeout means that creates a time interval
3 in which one of said remote stations must relinquish access
4 to said mobile robot.

1 14. The system of claim 11, wherein said arbitrator
2 means includes queue means for establishing a waiting list
3 of remote stations seeking access to said mobile robot.

1 15. The system of claim 11, wherein said arbitrator
2 means includes call back means for providing a message to
3 one of said remote stations that said mobile robot can be
4 accessed.

1 16. The system of claim 11, wherein said second remote
2 station can access said mobile robot, and said first and
3 second remote stations each have a priority and said
4 arbitrator means provides robot access to said remote
5 station with a highest priority.

1 17. The system of claim 16, wherein said remote
2 stations may be given priority as a local user, a doctor, a
3 caregiver, a family member, a service user or another
4 mobile robot.

1 18. The system of claim 11, wherein said mobile robot
2 operates in either an exclusive mode or a sharing mode.

1 19. The system of claim 11, wherein said first remote
2 station transmits a communication for said mobile robot

3 that is initially transmitted to said second remote
4 station.

1 20. The system of claim 11, wherein said first remote
2 station sends a communication for said mobile robot that is
3 initially transmitted to said mobile robot.

1 21. A method for controlling access to a remote
2 controlled robot, comprising:
3 transmitting a request to access a mobile robot from a
4 first remote station;
5 determining whether the first remote station should
6 have access to the mobile robot at a second remote station;
7 allowing access to the mobile robot; and,
8 transmitting video images between the robot and the
9 first remote station.

1 22. The method of claim 21, further comprising
2 requesting access to the mobile robot from the second
3 remote station and notifying the first remote station of
4 the request.

1 23. The method of claim 22, wherein the second remote
2 station creates a time interval in which the first remote
3 station must relinquish access to the mobile robot.

1 24. The method of claim 22, wherein the request from
2 the second remote station is placed in a waiting list
3 queue.

1 25. The method of claim 21, further comprising
2 transmitting a call back message from the second remote
3 station to the first remote station to indicate the
4 granting of access to the mobile robot.

1 26. The method of claim 21, wherein the access request
2 includes a priority that is evaluated by the second remote
3 station to determine access to the mobile robot.

1 27. The method of claim 26, wherein the remote
2 stations may be given priority as a local user, a doctor, a
3 caregiver, a family member, a service user or another
4 mobile robot.

1 28. The method of claim 25, wherein the mobile robot
2 operates in either an exclusive mode or a sharing mode.

1 29. The method of claim 25, wherein the access request
2 is initially transmitted to the second remote station.

1 30. The method of claim 25, wherein the access request
2 is initially transmitted to the mobile robot.

1 31. A robot system, comprising:
2 a broadband network;
3 a mobile robot that is coupled to said broadband
4 network, and has a camera and a monitor;
5 a first remote station that can access said mobile
6 robot through said broadband network; and,
7 a second remote station that includes an arbitrator
8 that can control access to said mobile robot by said first
9 and second remote stations.

1 32. The system of claim 31, wherein said arbitrator
2 includes a notification mechanism.

1 33. The system of claim 31, wherein said arbitrator
2 includes a timeout mechanism.

1 34. The system of claim 31, wherein said arbitrator
2 includes a queue mechanism.

1 35. The system of claim 31, wherein said arbitrator
2 includes a call back mechanism.

1 36. The system of claim 31, wherein said second remote
2 station can access said mobile robot, and said first and
3 second remote stations each have a priority and said
4 arbitrator provides robot access to said remote station
5 with a highest priority.

1 37. The system of claim 36, wherein said remote
2 stations may be given priority as a local user, a doctor, a
3 caregiver, a family member, a service user or another
4 mobile robot.

1 38. The system of claim 31, wherein said mobile robot
2 operates in either an exclusive mode or a sharing mode.

1 39. The system of claim 31, wherein said first remote
2 station transmits a communication for the mobile robot that
3 is initially transmitted to said second remote station.

1 40. The system of claim 31, wherein said first remote
2 station sends a communication for said mobile robot that is
3 initially transmitted to said mobile robot.

1 41. A robot system, comprising:
2 a broadband network;
3 a mobile robot that is coupled to said broadband
4 network, and has a camera and a monitor;
5 a first remote station that can access said mobile
6 robot through said broadband network; and,
7 a second remote station that includes arbitration means
8 for controlling access to said robot by said first and
9 second remote stations.

1 42. The system of claim 41, wherein said arbitrator
2 means includes notification means for notifying said first
3 remote station that said second remote station is
4 requesting access to said mobile robot.

1 43. The system of claim 41, wherein said arbitrator
2 means includes timeout means that creates a time interval
3 in which one of said remote stations must relinquish access
4 to said mobile robot.

1 44. The system of claim 41, wherein said arbitrator
2 means includes queue means for establishing waiting list of
3 remote stations seeking access to said mobile robot.

1 45. The system of claim 41, wherein said arbitrator
2 means includes call back means for providing a message to
3 one of said remote stations that said mobile robot can be
4 accessed.

1 46. The system of claim 41, wherein said second remote
2 station can access said mobile robot, and said first and
3 second remote stations each have a priority and said
4 arbitrator means provides robot access to said remote
5 station with a highest priority.

1 47. The system of claim 46, wherein said remote
2 stations may be given priority as a local user, a doctor, a

3 caregiver, a family member, a service user or another
4 mobile robot.

1 48. The system of claim 41, wherein said mobile robot
2 operates in either an exclusive mode or a sharing mode.

1 49. The system of claim 41, wherein said first remote
2 station transmits a communication for said mobile robot
3 that is initially transmitted to said second remote
4 station.

1 50. The system of claim 41, wherein said first remote
2 station sends a communication for said mobile robot that is
3 initially transmitted to said mobile robot.

1 51. A method for controlling access to a remote
2 controlled robot, comprising:
3 transmitting a request to access a mobile robot from a
4 first remote station through a broadband network;
5 determining whether the first remote station should
6 have access to the mobile robot at a second remote station;
7 allowing access to the mobile robot through the
8 broadband network; and,

9 transmitting video images between the robot and the
10 first remote station between the broadband network.

1 52. The method of claim 51, further comprising
2 requesting access to the mobile robot from the second
3 remote station and notifying the first remote station of
4 the request.

1 53. The method of claim 52, wherein the second remote
2 station creates a time interval in which the first remote
3 station must relinquish access to the mobile robot.

1 54. The method of claim 52, wherein the request from
2 the second remote station is placed in a waiting list
3 queue.

1 55. The method of claim 51, further comprising
2 transmitting a call back message from the second remote
3 station to the first remote station to indicate the
4 granting of access to the mobile robot.

1 56. The method of claim 51, wherein the access request
2 includes a priority that is evaluated by the second remote
3 station to determine access to the mobile robot.

1 57. The method of claim 56, wherein the remote
2 stations may be given priority as a local user, a doctor, a
3 caregiver, a family member, a service user or another
4 mobile robot.

1 58. The method of claim 51, wherein the mobile robot
2 operates in either an exclusive mode or a sharing mode.

1 59. The method of claim 51, wherein the access request
2 is initially transmitted to the second remote station.

1 60. The method of claim 51, wherein the access request
2 is initially transmitted to the mobile robot.